



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10**

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OFFICE OF
ENVIRONMENTAL CLEANUP

April 9, 2010

Karen Tarnow
Portland Harbor Stormwater Coordinator
Oregon DEQ, Northwest Region
2020 SW 4th Avenue, Ste. 400
Portland, Oregon 97201

Re: EPA Comments on "Draft Recontamination Evaluation Work Plan - Zidell
Waterfront Property"

Dear Ms. Tarnow:

EPA has reviewed the above referenced document which outlines a proposed approach to evaluate the potential for recontamination of the engineered cap being proposed for the contaminated sediments in the Willamette River adjacent to the Zidell property. We provide the following comments for DEQ to consider in proceeding forward with this site.

The evaluation relies on the use of the Sediment Contamination Assessment Model (SEDCAM), which is a screening-level mass balance model that predicts sediment concentration of contaminants of concern (COC) in relation to source loading (storm water runoff, upstream sources), biodegradation/bioturbation, surface sediment mixing, sedimentation rate, and contaminant concentration in the cap material over a specific time period. The SEDCAM model can be an effective tool to evaluate the impacts of storm water runoff and the effectiveness of source control measures as it relates to the natural recovery of contaminated sediments. However, this work plan does not outline how it will evaluate future source control measures that will be implemented at the site. The input information into the model should be realistic of existing and future site conditions and the hydraulic conditions and water quality in the upstream segment of the Willamette River.

Some considerations that need to be addressed in the recontamination evaluation are:

- Is the area subject to recontamination from the storm water runoff small when compared to the entire area being capped?
- Will the proposed remedy reduce greater risks from chemicals of concern than the chemicals that are predicted to re-contaminate the site?
- What source control measures (SCM) are effective in reducing contaminate loading to the river?
- A range of precipitation events should be evaluated, as a very heavy rain event may contribute higher loadings to the river.

Specific Comments:

Section 1

- 1) **Section 1.2.** Although the proposed remedy is a cap for the contaminated sediments, there is no discussion that at the barge launching area the highly contaminated sediments will be dredged and capped.
- 2) **Section 1.3.** The recontamination work plan does not intend to evaluate the potential impacts of the City of Portland's storm water outfall (COP Outfall 6) on the engineered cap. This outfall drains one-third of the Zidell property (Drainage Areas 4 and 5) and should be considered in the recontamination evaluation. Until the City of Portland has decommissioned this outfall, the potential for storm water flow from this outfall should be included in the modeling effort.

The work plan states that for the "purpose of the recontamination evaluation, it is assumed that storm water from this area will be managed via surface infiltration, eliminating discharges to the Willamette River from this portion of the site." There is no data to support that infiltration from this site will not reach the Willamette River. Until appropriate source control measures are implemented for this portion of the site, storm water runoff should be included in the recontamination evaluation.

- 3) **Section 1.5.3.** Point of compliance should be the average weighted COC concentration in the top 25 cm of the surficial sediments within the sediment cap boundary.

Section 2

- 1) **Section 2.4.** See comment 2 above. Until the City of Portland actually decommissions Outfall 6, this storm water loading from this outfall should be part of the recontamination evaluation.
- 2) **Section 2.4.** The work plan should include a discussion of how storm water runoff from Drainage Areas 6, 7 and 8 will be addressed.

Section 3

- 1) Zidell states that if unacceptable levels of recontamination are modeled (using the conservative assumption that all suspended solids discharged to the site are deposited within the depositional area) then they may run mixing zone evaluations to get a better number (supposedly more supportive of their position). The model should be reflective of actual in-stream conditions, including mixing zone influences and higher flows that may occur during precipitation events. The large volume of flow in the Willamette River could create conditions where the flow from the storm water discharges "hug" the shoreline and do not mix with the river until many meters downstream, and only impact a small portion of the cap. A model, such as CORMIX would be useful to predict mixing zone water quality
- 2) **Section 3.1** The model should predict the ratio of the recontaminated area to the entire area of remediation.

Section 4

- 1) **Section 4.1.1. Table 4.1.** To err on the conservative side, the full drainage basin area in the slipway should be used when determining runoff area, not half the potential drainage area as proposed.
- 2) **Section 4.1.2.** Upstream flow volumes should be considered in the SEDCAM model.
- 3) **Section 4.2.** The cap material should be free of COCs above unacceptable levels. The assumption that the concentrations of COCs in the cap material, particularly PCBs, will be up to 10 ug/kg is not supported by specific criteria or reference guidelines.

Section 6

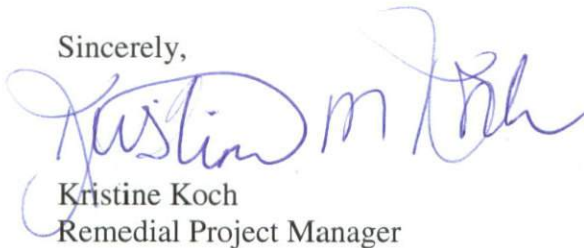
- 1) The calculations for the example recontamination evaluation were reviewed and are correct.
- 2) The runoff volumes for the slipway should be reflective of the entire surface area available, not just one-half of the area.

Appendix A

- 1) The storm water sampling plan appears to be appropriate for collecting the necessary samples to support the evaluation.

If you have any questions regarding this letter or would like to have further discussions regarding this site, please feel free to contact me at (206) 553-6705 or via email at koch.kristine@epa.gov.

Sincerely,



Kristine Koch
Remedial Project Manager
U.S. Environmental Protection Agency